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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,168	12/11/2003	Jiping Sun	67,114-004	5950
26/096 7590 05/29/2008 CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009				
EXAMINER				
GODBOLD, DOUGLAS				
ART UNIT		PAPER NUMBER		
2626				
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05/29/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/733,168

Applicant(s)

SUN ET AL.

Examiner

DOUGLAS C. GODBOLD

Art Unit

2626

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 and 4-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to correspondence filed April 7, 2008 in reference to application 10/733,168. Claims 2, and 4-7 are pending and have been examined.

Response to Amendment

2. The amendment filed April 7, 2008 has been accepted and considered in this office action. Claims 4-7 have been added and the specification has been amended.

Response to Arguments

3. Applicant's arguments filed April 7, 2008 have been fully considered but they are not persuasive.

4. With regards to applicant's arguments, see remarks, page 6, that Sun et al does not disclose "differentiation parameters," the examiner respectfully disagrees. The claim language does not describe what exactly a differentiation parameter is used for or composed of, and therefore the definition is open to interpretation. Therefore these frequencies can be read on differentiation parameters.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Sun et al (A Robust Speech Understanding System Using Conceptual Relational Grammar; page numbers will refer too by the BOLD numbers on the generated HTML page from the PDF).

7. Consider claim 2, Sun teaches a fuzzy grammar rule derivation system to learn fuzzy grammar from corpora (Grammar rules are derived from a corpus; page 2, column 2, line 8.) comprising:

a shallow parsing algorithm, which assigns syntactic categories to words (words are assigned syntactic categories; page 2, column 2, line 32.) and segments a sentence into syntactic phrases (Chart in page 2 column 2 shows a sentence that has been segmented into syntactic phrases.);

a syntactic weight assignment algorithm, which assigns syntactic weight to context vectors according to their relative importance to a concept (Section 3.2 teaches how rules are derived. Here a position is assigned to the context words, which extend out 3 words in each direction. As it is clear from the fact that only 3 words in each direction are considered, the further out from the word, the less important the context. Therefore the position vector is in fact an importance weighting.); and

a statistical parameter calculation algorithm, which assigns frequency and differentiation parameters to context vectors of concepts (page 3, bottom of column 1,

top of column 2, conceptual relations are listed with the frequencies and the pairing of the different contexts are differentiation parameters that define eat rule pair.

Frequencies is a statistical parameter.).

8. Consider claim 4, Sun teaches the method system of claim 2, wherein the shallow parsing algorithm produces syntactic phrases in response to concept classes (section 3.1 paragraph 3 shows concept classes) and at least one training corpus (section 2.1 discusses training corpus).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun in view of Wakefield et al. (US Patent 7,171,349).

11. Consider claim 5, Sun teaches the method of claim 2, but does not specifically teach wherein the syntactic weight assignment algorithm assigns syntactic weight in response to a word not being a stop word.

In the same field of language processing, Wakefield teaches only completing linguistic processing in response to a word not being a stop word (column 1 line 45-56 discusses not processing stop words in a linguistic system).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to process only non-stop words as taught by Wakefield in the system of Sun in order to remove words with little distinguishing value from consideration (Wakefield column 1 line 54).

12. Consider claim 6, Sun teaches the method of claim 2, but does not specifically teach wherein the statistical parameter calculation algorithm assigns parameters in response to a word not being a stop word.

In the same field of language processing, Wakefield teaches only completing linguistic processing in response to a word not being a stop word (column 1 line 45-56 discusses not processing stop words in a linguistic system).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to process only non-stop words as taught by Wakefield in the system of Sun in order to remove words with little distinguishing value from consideration (Wakefield column 1 line 54).

13. Consider claim 7, Sun teaches a method of learning fuzzy grammar (Grammar rules are derived from a corpus; page 2, column 2, line 8.), comprising:

creating semantic phases (Chart in page 2 column 2 shows a sentence that has been segmented into syntactic phrases.) in response to concept classes and at least one training corpus (section 3.1 paragraph 3 shows concept classes) and at least one training corpus (section 2.1 discusses training corpus);

marking a plurality of words in the semantic phrases with concepts (figure in section 3.1 shows phrases that have been annotated) from an annotated corpus sample (section 3.1 corpus is annotated);

calculating at least one syntactic weight (Section 3.2 teaches how rules are derived. Here a position is assigned to the context words, which extend out 3 words in each direction. As it is clear from the fact that only 3 words in each direction are considered, the further out from the word, the less important the context. Therefore the position vector is in fact an importance weighting) and at least one statistical parameter for each of the plurality of words word using a fuzzy concept rule (page 3, bottom of column 1, top of column 2, conceptual relations are listed with the frequencies and the pairing of the different contexts are differentiation parameters that define eat rule pair. Frequencies is a statistical parameter. Rules are shown section 3.3);

but does not specifically teach calculating in response to a word not being a stop word; and

ignoring a word in response to the word being a stop word.

In the same field of language processing, Wakefield teaches only completing linguistic processing in response to a word not being a stop word (column 1 line 45-56 discusses not processing stop words in a linguistic system).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to processes only non-stop words as taught by Wakefield in the system of Sun in order to remove words with little distinguishing value from consideration (Wakefield column 1 line 54).

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOUGLAS C. GODBOLD whose telephone number is (571)270-1451. The examiner can normally be reached on Monday-Thursday 7:00am-4:30pm Friday 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DCG
/Patrick N. Edouard/
Supervisory Patent Examiner, Art Unit 2626